Density and Thermal Conductivity of *N*-Alkylpyridinium Tetrafluoroborate at High Pressure

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Density and thermal conductivity are reported for a series of *N*-alkylpyridinium tetrafluoroborate having butyl, hexyl, and octyl groups, which are expressed by [BPY][BF_4], [HPY][BF_4], and [OPY][BF_4]. The density was measured with a vibrating tube densimeter. The experimental temperatures were from (293.15 to 353.15) K and pressures were up to 20.0 MPa. The experimental method used for thermal conductivity was a transient short hot wire method. Since only a small amount of sample liquid is required, this method was found to be effective for the thermal conductivity measurements of ionic liquids (ILs). The experimental temperatures ranged from 294 to 335 K at pressures up to 20 MPa. It was found that an effect of the length of the alkyl chain on the thermal conductivities in ILs is small. The experimental values at 293.15 K and 0.1 MPa compared with the predicted values proposed by Fröba et al.